

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

10X GENOMICS, INC. and PRESIDENT
AND FELLOWS OF HARVARD
COLLEGE,

Plaintiffs,

V.

NANOSTRING TECHNOLOGIES, INC.,

Defendant.

C.A. No. 22-261 (MFK)

**NANOSTRING TECHNOLOGIES, INC.’S FIRST AMENDED ANSWER,
AFFIRMATIVE DEFENSES, AND COUNTERCLAIMS TO 10X AND HARVARD’S
SECOND AMENDED COMPLAINT**

Defendant NanoString Technologies, Inc. (“NanoString”), answers and responds to each of the allegations in the Second Amended Complaint (“SAC”) of 10x Genomics, Inc. (“10x”) and President and Fellows of Harvard College (“Harvard”) (collectively “10x and Harvard”). Unless expressly admitted, NanoString denies each and every allegation in 10x and Harvard’s SAC. To the extent the allegations in the SAC purport to characterize the nature or contents of the Exhibits to the SAC, NanoString lacks sufficient knowledge or information to form a belief as to the truth of those allegations and on that basis denies them. Additionally, to the extent that the headings or any other non-numbered statements in the SAC contain any allegations, NanoString denies each and every such allegation.

NATURE OF THE ACTION

1. NanoString admits that the SAC purports to state a claim for patent infringement of United States Patent Nos. 10,227,639 (“the 639 Patent), 11,021,737 (“the 737 Patent”), 11,293,051 (“the 051 Patent”), 11,293,052 (“the 052 Patent”), 11,293,054 (“the 054 Patent”), and

11,542,554 (the “554 Patent”) (collectively, the “Asserted Patents”) arising under the patent laws of the United States, Title 35, United States Code, including 35 U.S.C. § 271. Except as so admitted, NanoString denies any remaining allegations in paragraph 1.

THE PARTIES

2. Admitted.

3. Denied.

4. NanoString lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 4 and on that basis denies them.

5. NanoString admits that it is a Delaware Corporation with its principal place of business is located in Seattle, WA. Except as so admitted, NanoString denies any remaining allegations in paragraph 5.

6. Denied.

JURISDICTION AND VENUE

7. NanoString incorporates by reference and restates its responses to paragraphs 1-6 of the SAC as though fully set forth herein.

8. NanoString admits that the SAC purports to state a claim for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 1, et seq., including in particular 35 U.S.C. §§ 271. NanoString further admits that this Court has subject matter jurisdiction over causes of action for alleged patent infringement pursuant to 28 U.S.C. §§ 1331 and 1338(a).

9. NanoString admits that it is an entity organized under the laws of Delaware and that venue is proper in this District. Except as so admitted, NanoString denies any remaining allegations of paragraph 9.

A. Response to Allegations Regarding 10x's Products

10. NanoString lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 10 and on that basis denies them.

11. NanoString lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 11 and on that basis denies them.

12. NanoString lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 12 and on that basis denies them.

13. NanoString lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 13 and on that basis denies them.

14. NanoString lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 14 and on that basis denies them.

B. Response To Allegations Regarding 10x and *In Situ* Technologies

15. Paragraph 15 of the SAC includes allegations that are vague, ambiguous, and incomplete, and on that basis NanoString denies the allegations of paragraph 15.

16. NanoString lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 16 and on that basis denies them.

17. NanoString lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 17 and on that basis denies them.

C. Response to Allegations Regarding NanoString's Products

18. NanoString admits that it announced the launch of its Technology Access Program for the Spatial Molecular Imager Platform in March 2021. NanoString further admits that it issued a press release referencing the new CosMx Spatial Molecular Imager in November 2021. NanoString admits that Paragraph 18 accurately quotes a portion of NanoString's website. Paragraph 18 of the SAC further includes allegations that purport to characterize technical aspects

of NanoString's products in a manner that is vague, ambiguous, and incomplete, and on that basis NanoString denies the remaining allegations of paragraph 18. NanoString further denies that it practices the Asserted Patents by using the CoxMx SMI workflow on behalf of its own scientists and researchers and for its CosMx SMI TAP customers.

19. NanoString admits that it advertises, offers for sale, and now sells and ships the CosMx SMI platform to and for customers in the United States. Paragraph 19 of the SAC further includes allegations that are vague, ambiguous, and incomplete, and on that basis NanoString denies the remaining allegations of paragraph 19.

20. NanoString admits that it makes, uses, sells, and supplies products, components, and services in connection with NanoString's CosMx Spatial Molecular Imaging platform. Paragraph 20 of the SAC otherwise includes allegations that purport to characterize NanoString's products in a manner that is vague, ambiguous, and incomplete, and on that basis NanoString denies the remaining allegations of paragraph 20.

D. Response to Allegations Regarding the Patents In Suit

21. Denied.

22. NanoString admits that, on its face, the 639 Patent states that it was issued on March 12, 2019 and that it lists the named inventors as Daniel Levner, Jehyuk Lee, George M. Church, and Michael Super. Except as so admitted, NanoString denies any remaining allegations of paragraph 22.

23. NanoString lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 23 and on that basis denies them.

24. NanoString admits that, on its face, the 737 Patent states that it was issued on June 1, 2021 and that it lists the named inventors as Daniel Levner, Jehyuk Lee, George M. Church,

and Michael Super. Except as so admitted, NanoString denies any remaining allegations of paragraph 24.

25. NanoString lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 25 and on that basis denies them.

26. NanoString admits that, on its face, the 051 Patent states that it was issued on April 5, 2022, and that it lists the named inventors as Daniel Levner, Jehyuk Lee, George M. Church, and Michael Super. Except as so admitted, NanoString denies any remaining allegations of paragraph 26.

27. NanoString lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 27 and on that basis denies them.

28. NanoString admits that, on its face, the 052 Patent states that it was issued on April 5, 2022, and that it lists the named inventors as Daniel Levner, Jehyuk Lee, George M. Church, and Michael Super. Except as so admitted, NanoString denies any remaining allegations of paragraph 28.

29. NanoString lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 29 and on that basis denies them.

30. NanoString admits that, on its face, the 054 Patent states that it was issued on April 5, 2022, and that it lists the named inventors as Daniel Levner, Jehyuk Lee, George M. Church, and Michael Super. Except as so admitted, NanoString denies any remaining allegations of paragraph 30.

31. NanoString lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 31 and on that basis denies them.

32. NanoString admits that, on its face, the 554 Patent states that it was issued on January 3, 2023, and that it lists the named inventors as Evan R. Daugharthy, Richard C. Terry, Je-Hyuk Lee, George M. Church, and Benjamin W. Pruitt. Except as so admitted, NanoString denies any remaining allegations of paragraph 32.

33. NanoString lacks sufficient knowledge or information to form a belief as to the truth of the allegations set forth in paragraph 33 and on that basis denies them.

34. NanoString admits that it has been aware of the 639 and 737 Patents since February 28, 2022, when 10x and Harvard filed their Complaint. NanoString admits that it has been aware of the 051, 052, and 054 Patents since May 12, 2022, when 10x and Harvard filed their First Amended Complaint. NanoString admits that it has been aware of the 554 Patent since February 2, 2023, when 10x stated its intent to add a claim of infringement of the 554 Patent to the 22-cv-261 litigation. Paragraph 34 otherwise states legal conclusions to which no response is required. To the extent that a response is required, NanoString denies the remaining allegations in this paragraph.

35. NanoString admits that it presented studies regarding the CosMx Spatial Molecular Imager at AGBT in July 2022. NanoString further admits it announced the first commercial shipment of the CosMx Spatial Molecular Imager in December 2022. Except as so admitted, NanoString denies any remaining allegations of paragraph 35.

COUNT I

36. NanoString incorporates and restates by reference its responses to paragraphs 1-35 of the SAC as though fully set forth herein.

37. Denied.

38. Denied.

39. Denied.

40. Denied.

41. Denied.

42. Denied.

43. Denied.

COUNT II

44. NanoString incorporates and restates by reference its responses to paragraphs 1-43 of the SAC as though fully set forth herein.

45. Denied.

46. Denied.

47. Denied.

48. Denied.

49. Denied.

50. Denied.

51. Denied.

COUNT III

52. NanoString incorporates and restates by reference its responses to paragraphs 1-51 of the SAC as though fully set forth herein.

53. Denied.

54. Denied.

55. Denied.

56. Denied.

57. Denied.

58. Denied.

59. Denied.

COUNT IV

60. NanoString incorporates and restates by reference its responses to paragraphs 1-59 of the SAC as though fully set forth herein.

61. Denied.

62. Denied.

63. Denied.

64. Denied.

65. Denied.

66. Denied.

67. Denied.

COUNT V

68. NanoString incorporates and restates by reference its responses to paragraphs 1-67 of the SAC as though fully set forth herein.

69. Denied.

70. Denied.

71. Denied.

72. Denied.

73. Denied.

74. Denied.

75. Denied.

COUNT VI

76. NanoString incorporates and restates by reference its responses to paragraphs 1-75 of the SAC as though fully set forth herein.

77. Paragraph 77 of the SAC further includes allegations that purport to characterize NanoString's products in a manner that is vague, ambiguous, and incomplete, and on that basis NanoString denies the remaining allegations of paragraph 77.

78. Denied.

79. Denied.

80. Denied.

81. Denied.

82. Denied.

83. Denied.

84. Denied.

85. Denied.

86. Denied.

PRAYER FOR RELIEF

NanoString denies that 10x and Harvard are entitled to any relief whatsoever, including the relief stated in paragraphs A through G, from either NanoString or the Court. 10x and Harvard's prayer for relief should be denied in its entirety.

AFFIRMATIVE DEFENSES

NanoString hereby sets forth defenses to the SAC in order to place 10x and Harvard on notice regarding applicable defenses. By listing any matter as a defense herein, NanoString does not assume the burden of proving any matter upon which 10x and Harvard, or any other party, bears the burden of proof under applicable law.

FIRST DEFENSE – NON-INFRINGEMENT

NanoString has not infringed, and is not infringing directly, indirectly, contributorily, by inducement, or in any other manner any valid and enforceable claim of the Asserted Patents, either literally or under the doctrine of equivalents.

SECOND DEFENSE – INVALIDITY

The asserted claims of the Asserted Patents are invalid for failing to comply with one or more of the requirements for patentability under, including, but not limited to 35 U.S.C. §§ 101, 102, 103, 112 et seq., and the rules, regulations, and laws pertaining to those provisions, including the applicable provisions of Title 37 of the Code of Federal Regulations.

THIRD DEFENSE – 35 U.S.C. § 287

10x and Harvard's patent infringement claims and Prayer for Relief are limited by 35 U.S.C. § 287.

FOURTH DEFENSE – ADEQUATE REMEDY AT LAW

10x and Harvard have an adequate remedy at law and the alleged injury to 10x and Harvard is not immediate or irreparable. Accordingly, 10x and Harvard are not entitled to injunctive relief in this matter even if it were able to establish liability.

FIFTH DEFENSE – NO EXCEPTIONAL CASE

NanoString has not engaged in any conduct that would make this an exceptional case or that would entitle 10x and Harvard to an award of attorneys' fees.

SIXTH DEFENSE – FAILURE TO STATE A CLAIM

10x and Harvard's SAC fails to state a claim upon which relief may be granted.

SEVENTH DEFENSE – UNCLEAN HANDS/MISUSE OF PATENT

10x and Harvard's patent infringement claims and Prayer for Relief are barred by the doctrine of unclean hands. As detailed in NanoString's counterclaims, *infra*, Paragraphs 156-230, 10x and Harvard's conduct constitutes unclean hands due to their fraudulent statements in the NIH grant application and/or their refusal to license their patent to NanoString in violation of the grant's licensing provision. Plaintiffs' behavior involved deceit and/or bad faith.

Plaintiffs' conduct directly and immediately related to and affects the matters and claims at issue in this case. For these reasons, they are barred from enforcing the Asserted Patents against Nanostring.

EIGHTH DEFENSE – LICENSE

10x and Harvard's request for injunctive relief in this matter is barred by license. As explained in NanoString's counterclaims, *infra*, Paragraph(s) 156-230, Harvard and 10x committed to offering a non-exclusive license to the asserted patents, which precludes Harvard and 10x from obtaining injunctive relief.

NINTH DEFENSE – LACK OF STANDING

10x and Harvard do not have standing to bring the asserted claims of the Asserted Patents, and this Court is without jurisdiction to hear those claims. Fed. R. Civ. P. 12(b)(1).

RESERVATION OF ALL DEFENSES

NanoString reserves the right to offer any other and additional defense that is now or may become available or appear during, or as a result of, discovery pleadings in this action.

NANOSTRING'S COUNTERCLAIMS AGAINST 10X AND HARVARD

In support of its counterclaims against 10x and Harvard, NanoString alleges as follows:

NATURE OF THE ACTION

1. In response to 10x and Harvard's allegations in the SAC, NanoString seeks a declaratory judgment that it has not infringed the Asserted Patents and that the Asserted Patents are invalid. In addition, NanoString seeks damages for 10x and Harvard's antitrust violations described herein; an injunction preventing 10x and Harvard from seeking to exclude competition in the worldwide Single-Cell Spatial Transcriptomics Market; specific performance under the Grant by which NanoString is offered a *bona fide* non-exclusive license to the rights referenced in the Grant licensing commitments at a reasonable rate to be negotiated in good faith by the parties, or, alternatively, a compulsory license to the rights referenced in the Grant licensing commitments at a reasonable rate to be determined by a fact-finder.¹ In any event, NanoString is entitled to license the Asserted Patents at a reasonable, nondiscriminatory royalty rate.

THE PARTIES

2. 10x is a Delaware corporation with its principal place of business at 6230 Stoneridge Mall Road, Pleasanton, CA 94588.

3. Harvard is a Massachusetts educational institution according to its allegations in the SAC.

4. NanoString is a Delaware corporation with its principal place of business at 530 Fairview Ave. N, Seattle, WA 98109.

¹ For the avoidance of any doubt, the injunctive request in this pleading does not include a request for an anti-suit/enforcement injunction directly or indirectly prohibiting the applicants from continuing the patent infringement proceedings before the Regional Court Munich I with docket no. 7 O 2693/22 or from enforcing a judgment issued in those proceedings ordering injunctive relief.

JURISDICTION AND VENUE

5. The Court has subject matter jurisdiction over NanoString's declaratory judgment counterclaims pursuant to 28 U.S.C. §§ 2201 & 2202. The Court has subject matter jurisdiction over NanoString's federal antitrust counterclaims pursuant to 28 U.S.C. § 1331. The Court has subject matter jurisdiction over NanoString's state law counterclaims pursuant to 28 U.S.C. § 1367.

6. The Court has personal jurisdiction over 10x and Harvard because 10x is a Delaware corporation and both 10x and Harvard have consented to jurisdiction in this District by filing their SAC in this action.

7. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391 and 1400(b) because 10x is a Delaware corporation and both 10x and Harvard have consented to this venue by filing their original Complaint in this action.

FIRST COUNT

(Declaration of Non-Infringement of United States Patent No. 10,227,639)

8. NanoString incorporates by references and restates the preceding Paragraphs 1-7 of its Counterclaims as though fully set forth herein.

9. 10x and Harvard have brought an action asserting the 639 Patent against NanoString.

10. Harvard has alleged that it is the legal owner by assignment of the 639 Patent.

11. 10x has alleged that it is the exclusive licensee of the 639 Patent.

12. 10x and Harvard have alleged and continue to allege that NanoString has infringed and continues to infringe one or more claims of the 639 Patent.

13. An actual controversy, within the meaning of 28 U.S.C. §§ 2201 and 2202, has arisen and exists between 10x and Harvard and NanoString concerning whether NanoString has infringed and is infringing any valid and enforceable claim of the 639 Patent.

14. NanoString's products are not infringing directly or in any other manner any valid and enforceable claim of the 639 Patent.

15. For example, as described therein, when properly construed, the 639 Patent claims require analytes to be immobilized in the sample for analyte identification. In contrast, NanoString's CosMx SMI does not immobilize analytes for analyte identification.

16. Also, as described therein, when properly construed, the 639 Patent claims require pre-determined subsequences to form an identifier of analyte. In contrast, to the extent they are used in CosMx SMI, pre-determined subsequences are not identifiers, but intermediate sequences for hybridization of probes.

17. Furthermore, as described therein, when properly construed, the 639 Patent claims require a first decoder probe to be removed before the hybridization of the second decoder probe. In contrast, CosMx SMI do not remove any such decoder probes during hybridization.

18. Moreover, as described therein, when properly construed, the 639 Patent claims require identification of a probe for analyte identification. In contrast, NanoString's CosMx SMI does not identify a probe to identify an analyte.

19. Besides, as described therein, when properly construed, the 639 Patent claims require the use of two detectable labels for analyte identification. To the extent any accused products do not use two detectable labels for analyte identification, they do not infringe the 639 Patent.

20. By virtue of the foregoing, NanoString desires a judicial determination of its rights and duties with respect to any alleged infringement of the 639 Patent.

21. A judicial declaration is necessary and appropriate at this time so that the parties may proceed in accordance with their respective rights and duties determined by the Court.

SECOND COUNT

(Declaration of Non-Infringement of United States Patent No. 11,021,737)

22. NanoString incorporates by references and restates the preceding Paragraphs 1-21 of its Counterclaims as though fully set forth herein.

23. 10x and Harvard have brought an action asserting the 737 Patent against NanoString.

24. Harvard has alleged that it is the legal owner by assignment of the 737 Patent.

25. 10x has alleged that it is the exclusive licensee of the 737 Patent.

26. 10x and Harvard have alleged and continue to allege that NanoString has infringed and continues to infringe one or more claims of the 737 Patent.

27. An actual controversy, within the meaning of 28 U.S.C. §§ 2201 and 2202, has arisen and exists between 10x and Harvard and NanoString concerning whether NanoString has infringed and is infringing any valid and enforceable claim of the 737 Patent.

28. NanoString's products are not infringing directly or in any other manner any valid and enforceable claim of the 737 Patent.

29. For example, as described therein, when properly construed, the 737 Patent claims require the analytes to be in the cell or tissue sample during analyte identification. In contrast, NanoString's CosMx SMI does not identify analytes in the cell or tissue sample.

30. Furthermore, as described therein, when properly construed, the 737 Patent claims require signal signatures to be associated with one or more pre-determined subsequences. In

contrast, to the extent they are used in CosMx SMI, signal signatures are not associated with pre-determined subsequences, but with the hybridized decoder probes.

31. Moreover, as described therein, when properly construed, the 737 Patent claims require first decoder probe to be removed before the hybridization of the second decoder probe. In contrast, CosMx SMI does not remove the decoder probes during serial hybridization.

32. Besides, as described therein, when properly construed, the 737 Patent require a temporal order of signal signatures for analyte identification. In contrast, CosMx SMI does not use a temporal order of signal signatures for analyte identification.

33. By virtue of the foregoing, NanoString desires a judicial determination of its rights and duties with respect to any alleged infringement of the 737 Patent.

34. A judicial declaration is necessary and appropriate at this time so that the parties may proceed in accordance with their respective rights and duties determined by the Court.

THIRD COUNT

(Declaration of Non-Infringement of United States Patent No. 11,293,051)

35. NanoString incorporates by references and restates the preceding Paragraphs 1-34 of its Counterclaims as though fully set forth herein.

36. 10x and Harvard have brought an action asserting the 051 Patent against NanoString.

37. Harvard has alleged that it is the legal owner by assignment of the 051 Patent.

38. 10x has alleged that it is the exclusive licensee of the 051 Patent.

39. 10x and Harvard have alleged and continue to allege that NanoString has infringed and continues to infringe one or more claims of the 051 Patent.

40. An actual controversy, within the meaning of 28 U.S.C. §§ 2201 and 2202, has arisen and exists between 10x and Harvard and NanoString concerning whether NanoString has infringed and is infringing any valid and enforceable claim of the 051 Patent.

41. NanoString's products are not infringing directly or in any other manner any valid and enforceable claim of the 051 Patent.

42. For example, as described therein, when properly construed, the 051 Patent claims require the analytes to be in the cell or tissue sample for analyte identification. In contrast, NanoString's CosMx SMI does not identify analytes in the cell or tissue sample.

43. Also, as described therein, when properly construed, the 051 Patent claims require a temporal order of signal signatures to correspond to a location in a cell or tissue sample. In contrast, NanoString's CosMx SMI does not use a temporal order of signal signatures corresponding to a location.

44. Furthermore, as described therein, when properly construed, the 051 Patent claims require first plurality of signal signatures to be removed from the cell or tissue sample before the second readout cycle. In contrast, CosMx SMI does not remove a first plurality of signal signatures from the cell or tissue sample, but from the bound probes.

45. Moreover, as described therein, when properly construed, the 051 Patent claims require the first subset of detection reagents associated with the first set of decoding reagents and the second set of detection reagents associated with the second set of decoding reagents to overlap. To the extent any of the accused products do not let the first subset of detection reagents and the second subset of detection reagents to overlap, they do not infringe the 051 Patent.

46. By virtue of the foregoing, NanoString desires a judicial determination of its rights and duties with respect to any alleged infringement of the 051 Patent.

47. A judicial declaration is necessary and appropriate at this time so that the parties may proceed in accordance with their respective rights and duties determined by the Court.

FOURTH COUNT

(Declaration of Non-Infringement of United States Patent No. 11,293,052)

48. NanoString incorporates by references and restates the preceding Paragraphs 1-47 of its Counterclaims as though fully set forth herein.

49. 10x and Harvard have brought an action asserting the 052 Patent against NanoString.

50. Harvard has alleged that it is the legal owner by assignment of the 052 Patent.

51. 10x has alleged that it is the exclusive licensee of the 052 Patent.

52. 10x and Harvard have alleged and continue to allege that NanoString has infringed and continues to infringe one or more claims of the 052 Patent.

53. An actual controversy, within the meaning of 28 U.S.C. §§ 2201 and 2202, has arisen and exists between 10x and Harvard and NanoString concerning whether NanoString has infringed and is infringing any valid and enforceable claim of the 052 Patent.

54. NanoString's products are not infringing directly or in any other manner any valid and enforceable claim of the 052 Patent.

55. For example, as described therein, when properly construed, the 052 Patent claims require the analyte to be at a location in a biological sample during identification. In contrast, NanoString's CosMx SMI does not identify the analyte at the location in a biological sample.

56. Furthermore, as described therein, when properly construed, the 052 Patent claims require the first optical signal to be removed from the location in the biological sample before the second readout cycle. In contrast, CosMx SMI does not remove the first optical signal from the sample, but from the bound probes.

57. Moreover, as described therein, when properly construed, the 052 Patent claims require the detection of multiple signal signatures and the absence thereof during analyte identification. To the extent any of the accused products do not detect multiple signal signatures for analyte detection, they do not infringe the 052 Patent.

58. By virtue of the foregoing, NanoString desires a judicial determination of its rights and duties with respect to any alleged infringement of the 052 Patent.

59. A judicial declaration is necessary and appropriate at this time so that the parties may proceed in accordance with their respective rights and duties determined by the Court.

FIFTH COUNT

(Declaration of Non-Infringement of United States Patent No. 11,293,054)

60. NanoString incorporates by references and restates the preceding Paragraphs 1-59 of its Counterclaims as though fully set forth herein.

61. 10x and Harvard have brought an action asserting the 054 Patent against NanoString.

62. Harvard has alleged that it is the legal owner by assignment of the 054 Patent.

63. 10x has alleged that it is the exclusive licensee of the 054 Patent.

64. 10x and Harvard have alleged and continue to allege that NanoString has infringed and continues to infringe one or more claims of the 054 Patent.

65. An actual controversy, within the meaning of 28 U.S.C. §§ 2201 and 2202, has arisen and exists between 10x and Harvard and NanoString concerning whether NanoString has infringed and is infringing any valid and enforceable claim of the 054 Patent.

66. NanoString's products are not infringing directly or in any other manner any valid and enforceable claim of the 054 Patent.

67. For example, as described therein, when properly construed, the 054 Patent claims require generation of signal signatures in a cell or tissue sample. In contrast, NanoString's CosMx SMI does not generate a signal signatures in a cell or tissue sample.

68. Furthermore, as described therein, when properly construed, the 054 Patent claims require a nucleic acid label coupled to a probe to permit the said probe to bind to an analyte. In contrast, to the extent it is used in NanoString's CosMx SMI, a nucleic acid label does not permit the probe to bind to an analyte. Rather, the probe is itself designed to target an analyte.

69. Moreover, as described therein, when properly construed, the 054 Patent claims require first decoder probe to be removed before the hybridization of the second decoder probe. In contrast, CosMx SMI do not remove the decoder probes during serial hybridization.

70. By virtue of the foregoing, NanoString desires a judicial determination of its rights and duties with respect to any alleged infringement of the 054 Patent.

71. A judicial declaration is necessary and appropriate at this time so that the parties may proceed in accordance with their respective rights and duties determined by the Court.

SIXTH COUNT

(Declaration of Non-Infringement of United States Patent No. 11,542,554)

72. NanoString incorporates by references and restates the preceding Paragraphs 1-71 of its Counterclaims as though fully set forth herein.

73. 10x and Harvard have brought an action asserting the 554 Patent against NanoString.

74. Harvard has alleged that it is the legal owner by assignment of the 554 Patent.

75. 10x has alleged that it is the exclusive licensee of the 554 Patent.

76. 10x and Harvard have alleged and continue to allege that NanoString has infringed and continues to infringe one or more claims of the 554 Patent.

77. An actual controversy, within the meaning of 28 U.S.C. §§ 2201 and 2202, has arisen and exists between 10x and Harvard and NanoString concerning whether NanoString has infringed and is infringing any valid and enforceable claim of the 554 Patent.

78. NanoString's products are not infringing directly or in any other manner any valid and enforceable claim of the 554 Patent.

79. For example, as described therein, when properly construed, the 554 Patent claims require light signals associated with nucleic acid molecules within a sample. In contrast, to the extent they are used in NanoString's CosMx SMI, light signals are not associated with nucleic acid molecules within a sample.

80. Similarly, as described therein, when properly construed, the 554 Patent claims require optically-encoded signal associated with a nucleic acid molecule within a sample. In contrast, to the extent it is used in NanoString's CosMx SMI, the optically-encoded signal is not associated with a nucleic acid molecule within a sample.

81. Furthermore, as described therein, when properly construed, the 554 Patent claims require a plurality of images comprise a plurality of light signals received during a plurality of readout cycles. In contrast, to the extent they are used in NanoString's CosMx SMI, the images may not comprise light signals.

82. By virtue of the foregoing, NanoString desires a judicial determination of its rights and duties with respect to any alleged infringement of the 554 Patent.

83. A judicial declaration is necessary and appropriate at this time so that the parties may proceed in accordance with their respective rights and duties determined by the Court.

SEVENTH COUNT

(Declaration of Invalidity of U.S. Patent No. 10,227,639)

84. NanoString incorporates by references and restates the preceding Paragraphs 1-83 of its Counterclaims as though fully set forth herein.

85. 10x and Harvard have brought an action asserting the 639 Patent against NanoString.

86. Harvard has alleged that it is the legal owner by assignment of the 639 Patent.

87. 10x has alleged that it is the exclusive license of the 639 Patent.

88. 10x and Harvard have alleged and continue to allege that NanoString has infringed and continues to infringe one or more claims of the 639 Patent.

89. An actual controversy, within the meaning of 28 U.S.C. §§ 2201 and 2202, has arisen and exists between 10x and Harvard and NanoString concerning whether NanoString has infringed and is infringing any valid and enforceable claim of the 639 Patent.

90. The claims of the 639 Patent are invalid for failing to comply with the provisions of the Patent Laws, Title 35 of the United States Code, including without limitation one or more of 35 U.S.C. §§ 101, 102, 103, 112, and/or 116, and/or the rules, regulations and law pertaining thereto.

91. For example, the asserted claims of the Asserted Patents are invalid under 35 U.S.C. §§ 102 and/or 103 at least in view of U.S. Patent No. 10,961,566 (“Chee”), alone or in combination with additional prior art, including U.S. Patent App. Pub. No. 2005/0064435 (“Su”), Göransson et al., A single molecule array for digital targeted molecular analyses, 37 Nucleic Acids Research e7 (2008) (“Göransson”), or U.S. Patent No. 8,741,566 (“Winther”), which disclose and/or render obvious all elements of the claims of the Asserted Patents.

92. All claims of the Asserted Patents are further invalid for failure to satisfy the requirements of 35 U.S.C. § 112. For example, the claim term “temporal order”, read in light of the specification and the prosecution history, fails to inform, with reasonable certainty, those skilled in the art of the boundaries of protected subject matter, and therefore does not meet the definiteness standard.

93. Moreover, the specifications of the Asserted Patents fail to contain a written description of the claims or sufficient information to enable a person of ordinary skill in the art to practice the full scope of the claims. For example, there is a lack of an adequate written description and a lack of enablement for signal detection in the cell or tissue sample.

94. By virtue of the foregoing, NanoString desires a judicial determination of its rights and duties with respect to any alleged infringement of the 639 Patent.

95. A judicial declaration is necessary and appropriate at this time so that the parties may proceed in accordance with their respective rights and duties determined by the Court.

EIGHTH COUNT

(Declaration of Invalidity of U.S. Patent No. 11,021,737)

96. NanoString incorporates by references and restates the preceding Paragraphs 1-95 of its Counterclaims as though fully set forth herein.

97. 10x and Harvard have brought an action asserting the 737 Patent against NanoString.

98. Harvard has alleged that it is the legal owner by assignment of the 737 Patent.

99. 10x has alleged that it is the exclusive license of the 737 Patent.

100. 10x and Harvard have alleged and continue to allege that NanoString has infringed and continues to infringe one or more claims of the 737 Patent.

101. An actual controversy, within the meaning of 28 U.S.C. §§ 2201 and 2202, has arisen and exists between 10x and Harvard and NanoString concerning whether NanoString has infringed and is infringing any valid and enforceable claim of the 737 Patent.

102. The claims of the 737 Patent are invalid for failing to comply with the provisions of the Patent Laws, Title 35 of the United States Code, including without limitation one or more of 35 U.S.C. §§ 101, 102, 103, 112, and/or 116, and/or the rules, regulations and law pertaining thereto.

103. For example, the asserted claims of the Asserted Patents are invalid under 35 U.S.C. §§ 102 and/or 103 at least in view of U.S. Patent No. 10,961,566 (“Chee”), alone or in combination with additional prior art, including U.S. Patent App. Pub. No. 2005/0064435 (“Su”), Göransson et al., A single molecule array for digital targeted molecular analyses, 37 Nucleic Acids Research e7 (2008) (“Göransson”), or U.S. Patent No. 8,741,566 (“Winther”), which disclose and/or render obvious all elements of the claims of the Asserted Patents.

104. All claims of the Asserted Patents are further invalid for failure to satisfy the requirements of 35 U.S.C. § 112. For example, the claim term “temporal order”, read in light of the specification and the prosecution history, fails to inform, with reasonable certainty, those skilled in the art of the boundaries of protected subject matter, and therefore does not meet the definiteness standard.

105. Moreover, the specifications of the Asserted Patents fail to contain a written description of the claims or sufficient information to enable a person of ordinary skill in the art to practice the full scope of the claims. For example, there is a lack of an adequate written description and a lack of enablement for generating a three dimensional matrix of nucleic acids in situ in a cell or tissue sample and amplifying, detecting, and sequencing such nucleic acids within the matrix;

there is also a lack of an adequate written description and a lack of enablement for analyte detection while allowing spatial movement of an analyte in a sample.

106. By virtue of the foregoing, NanoString desires a judicial determination of its rights and duties with respect to any alleged infringement of the 737 Patent.

107. A judicial declaration is necessary and appropriate at this time so that the parties may proceed in accordance with their respective rights and duties determined by the Court.

NINTH COUNT

(Declaration of Invalidity of U.S. Patent No. 11,293,051)

108. NanoString incorporates by reference and restates the preceding Paragraphs 1-107 of its Counterclaims as though fully set forth herein.

109. 10x and Harvard have brought an action asserting the 051 Patent against NanoString.

110. Harvard has alleged that it is the legal owner by assignment of the 051 Patent.

111. 10x has alleged that it is the exclusive license of the 051 Patent.

112. 10x and Harvard have alleged and continue to allege that NanoString has infringed and continues to infringe one or more claims of the 051 Patent.

113. An actual controversy, within the meaning of 28 U.S.C. §§ 2201 and 2202, has arisen and exists between 10x and Harvard and NanoString concerning whether NanoString has infringed and is infringing any valid and enforceable claim of the 051 Patent.

114. The claims of the 051 Patent are invalid for failing to comply with the provisions of the Patent Laws, Title 35 of the United States Code, including without limitation one or more of 35 U.S.C. §§ 101, 102, 103, 112, and/or 116, and/or the rules, regulations and law pertaining thereto.

115. For example, the asserted claims of the Asserted Patents are invalid under 35 U.S.C. §§ 102 and/or 103 at least in view of U.S. Patent No. 10,961,566 (“Chee”), alone or in combination with additional prior art, including U.S. Patent App. Pub. No. 2005/0064435 (“Su”), Göransson et al., A single molecule array for digital targeted molecular analyses, 37 Nucleic Acids Research e7 (2008) (“Göransson”), or U.S. Patent No. 8,741,566 (“Winther”), which disclose and/or render obvious all elements of the claims of the Asserted Patents.

116. Moreover, the specifications of the Asserted Patents fail to contain a written description of the claims or sufficient information to enable a person of ordinary skill in the art to practice the full scope of the claims. For example, there is a lack of an adequate written description and a lack of enablement for generating a three dimensional matrix of nucleic acids in situ in a cell or tissue sample and amplifying, detecting, and sequencing such nucleic acids within the matrix; there is also a lack of an adequate written description and a lack of enablement for analyte detection while allowing spatial movement of an analyte in a sample.

117. By virtue of the foregoing, NanoString desires a judicial determination of its rights and duties with respect to any alleged infringement of the 051 Patent.

118. A judicial declaration is necessary and appropriate at this time so that the parties may proceed in accordance with their respective rights and duties determined by the Court.

TENTH COUNT

(Declaration of Invalidity of U.S. Patent No. 11,293,052)

119. NanoString incorporates by references and restates the preceding Paragraphs 1-118 of its Counterclaims as though fully set forth herein.

120. 10x and Harvard have brought an action asserting the 052 Patent against NanoString.

121. Harvard has alleged that it is the legal owner by assignment of the 052 Patent.

122. 10x has alleged that it is the exclusive licensee of the 052 Patent.

123. 10x and Harvard have alleged and continue to allege that NanoString has infringed and continues to infringe one or more claims of the 052 Patent.

124. An actual controversy, within the meaning of 28 U.S.C. §§ 2201 and 2202, has arisen and exists between 10x and Harvard and NanoString concerning whether NanoString has infringed and is infringing any valid and enforceable claim of the 052 Patent.

125. The claims of the 052 Patent are invalid for failing to comply with the provisions of the Patent Laws, Title 35 of the United States Code, including without limitation one or more of 35 U.S.C. §§ 101, 102, 103, 112, and/or 116, and/or the rules, regulations and law pertaining thereto.

126. For example, the asserted claims of the Asserted Patents are invalid under 35 U.S.C. §§ 102 and/or 103 at least in view of U.S. Patent No. 10,961,566 (“Chee”), alone or in combination with additional prior art, including U.S. Patent App. Pub. No. 2005/0064435 (“Su”), Göransson et al., A single molecule array for digital targeted molecular analyses, 37 Nucleic Acids Research e7 (2008) (“Göransson”), or U.S. Patent No. 8,741,566 (“Winther”), which disclose and/or render obvious all elements of the claims of the Asserted Patents.

127. All claims of the Asserted Patents are further invalid for failure to satisfy the requirements of 35 U.S.C. § 112. For example, the claim terms “signal signature” and “temporal order”, read in light of the specification and the prosecution history, fails to inform, with reasonable certainty, those skilled in the art of the boundaries of protected subject matter, and therefore does not meet the definiteness standard.

128. Moreover, the specifications of the Asserted Patents fail to contain a written description of the claims or sufficient information to enable a person of ordinary skill in the art to

practice the full scope of the claims. For example, there is a lack of an adequate written description and a lack of enablement for analyte identification at a location in a biological sample.

129. By virtue of the foregoing, NanoString desires a judicial determination of its rights and duties with respect to any alleged infringement of the 052 Patent.

130. A judicial declaration is necessary and appropriate at this time so that the parties may proceed in accordance with their respective rights and duties determined by the Court.

ELEVENTH COUNT

(Declaration of Invalidity of U.S. Patent No. 11,293,054)

131. NanoString incorporates by references and restates the preceding Paragraphs 1-130 of its Counterclaims as though fully set forth herein.

132. 10x and Harvard have brought an action asserting the 054 Patent against NanoString.

133. Harvard has alleged that it is the legal owner by assignment of the 054 Patent.

134. 10x has alleged that it is the exclusive licensee of the 054 Patent.

135. 10x and Harvard have alleged and continue to allege that NanoString has infringed and continues to infringe one or more claims of the 054 Patent.

136. An actual controversy, within the meaning of 28 U.S.C. §§ 2201 and 2202, has arisen and exists between 10x and Harvard and NanoString concerning whether NanoString has infringed and is infringing any valid and enforceable claim of the 054 Patent.

137. The claims of the 054 Patent are invalid for failing to comply with the provisions of the Patent Laws, Title 35 of the United States Code, including without limitation one or more of 35 U.S.C. §§ 101, 102, 103, 112, and/or 116, and/or the rules, regulations and law pertaining thereto.

138. For example, the asserted claims of the Asserted Patents are invalid under 35 U.S.C. §§ 102 and/or 103 at least in view of U.S. Patent No. 10,961,566 (“Chee”), alone or in combination with additional prior art, including U.S. Patent App. Pub. No. 2005/0064435 (“Su”), Göransson et al., A single molecule array for digital targeted molecular analyses, 37 Nucleic Acids Research e7 (2008) (“Göransson”), or U.S. Patent No. 8,741,566 (“Winther”), which disclose and/or render obvious all elements of the claims of the Asserted Patents.

139. All claims of the Asserted Patents are further invalid for failure to satisfy the requirements of 35 U.S.C. § 112. For example, the claim term “temporal order”, read in light of the specification and the prosecution history, fails to inform, with reasonable certainty, those skilled in the art of the boundaries of protected subject matter, and therefore does not meet the definiteness standard.

140. Moreover, the specifications of the Asserted Patents fail to contain a written description of the claims or sufficient information to enable a person of ordinary skill in the art to practice the full scope of the claims. For example, there is a lack of an adequate written description and a lack of enablement for signal detection in the cell or tissue sample.

141. By virtue of the foregoing, NanoString desires a judicial determination of its rights and duties with respect to any alleged infringement of the 054 Patent.

142. A judicial declaration is necessary and appropriate at this time so that the parties may proceed in accordance with their respective rights and duties determined by the Court.

TWELFTH COUNT

(Declaration of Invalidity of U.S. Patent No. 11,542,554)

143. NanoString incorporates by references and restates the preceding Paragraphs 1-142 of its Counterclaims as though fully set forth herein.

144. 10x and Harvard have brought an action asserting the 554 Patent against NanoString.

145. Harvard has alleged that it is the legal owner by assignment of the 554 Patent.

146. 10x has alleged that it is the exclusive licensee of the 554 Patent.

147. 10x and Harvard have alleged and continue to allege that NanoString has infringed and continues to infringe one or more claims of the 554 Patent.

148. An actual controversy, within the meaning of 28 U.S.C. §§ 2201 and 2202, has arisen and exists between 10x and Harvard and NanoString concerning whether NanoString has infringed and is infringing any valid and enforceable claim of the 554 Patent.

149. The claims of the 554 Patent are invalid for failing to comply with the provisions of the Patent Laws, Title 35 of the United States Code, including without limitation one or more of 35 U.S.C. §§ 101, 102, 103, 112, and/or 116, and/or the rules, regulations and law pertaining thereto.

150. For example, the asserted claims of the Asserted Patents are invalid under 35 U.S.C. §§ 102 and/or 103 at least in view of Lee, Je Hyuk, et al. "Highly multiplexed subcellular RNA sequencing in situ." *science* 343.6177 (2014): 1360-1363 ("Lee"), alone or in combination with additional prior art, including Lubeck, Eric, et al. "Single-cell in situ RNA profiling by sequential hybridization." *Nature methods* 11.4 (2014): 360-361 ("Lubeck"), U.S. Pat. Pub. No. 2012/0046203, Walsh et al., February 23, 2012 ("Walsh"), or Heinzman, Jamie M., Shara D. Rice, and L. A. Corkan. "Robotic liquid handlers and semiautomated cell quantification systems increase consistency and reproducibility in high-throughput, cell-based assay." *JALA: Journal of the Association for Laboratory Automation* 15.1 (2010): 7-14 ("Heinzman"), which disclose and/or render obvious all elements of the claims of the Asserted Patents.

151. All claims of the Asserted Patents are further invalid for failure to satisfy the requirements of 35 U.S.C. § 112. For example, the claim terms “optically-encoded signals” and “nucleic acid molecules within said volume”, read in light of the specification and the prosecution history, fails to inform, with reasonable certainty, those skilled in the art of the boundaries of protected subject matter, and therefore does not meet the definiteness standard.

152. As another example, the claim language “a computing system comprising at least one computer readable storage medium having program instructions stored thereon, which program instructions are executable by at least one processor of said computing system to cause said at least one processor to perform a method comprising” is directed to both an apparatus and a method of using the apparatus, and when read in light of the specification and the prosecution history, fails to inform, with reasonable certainty, those skilled in the art of the boundaries of protected subject matter, and therefore does not meet the definiteness standard.

153. Moreover, the specifications of the Asserted Patents fail to contain a written description of the claims or sufficient information to enable a person of ordinary skill in the art to practice the full scope of the claims. For example, there is a lack of an adequate written description and a lack of enablement for determination of three-dimensional positional information of nucleic acid molecules within sample.

154. By virtue of the foregoing, NanoString desires a judicial determination of its rights and duties with respect to any alleged infringement of the 554 Patent.

155. A judicial declaration is necessary and appropriate at this time so that the parties may proceed in accordance with their respective rights and duties determined by the Court.

THIRTEENTH COUNT

**(Attempted Monopolization of the Single-Cell Spatial Transcriptomics Market
in Violation of Section 2 of the Sherman Act)**

156. NanoString incorporates by references and restates the preceding Paragraphs 1-155 of its Counterclaims as though fully set forth herein.

157. Section 2 of the Sherman Act prohibits the monopolization of any part of the trade or commerce among the several States. 15 U.S.C. § 2.

158. 10x and Harvard are subject to an obligation to make Asserted Patents available with non-exclusive licensing agreements. This obligation comes from the National Institutes of Health (“NIH”) Grant that funded the very research that resulted in the Asserted Patents. But instead of fulfilling their obligation, 10x and Harvard have pursued injunctions worldwide to knock out potential threats and attempt to form an ill-gotten monopoly in the Single-Cell Spatial Transcriptomics (“SST”) market.

The NIH Grant

159. On or about May 2009, George M. Church, and Harvard applied for grant funding from the NIH, which was assigned Grant No. HG005550. To enable the NIH policy of making technology created with government grant money widely available, such grant funding carries a requirement to make the innovations developed with the NIH grant funds “available to the larger research community.” D.I. 119-4 at VIZ00099673; (Exhibit A at VIZ00099673).

160. The NIH grant application pertained to Harvard’s Center for Transcriptional Consequences of Human Genetic Variation (CTCHGV). CTCHGV was led by Dr. Church.

161. Dr. Church and Harvard obtained the grant. A true and correct copy of the Grant materials is attached as Exhibit A (“Grant”).

162. The Grant states that “CTCHGV **will pursue open and non-exclusive licensing agreements** that encourage innovations to be made widely available to researchers and commercial entities.”² D.I. 119-4 at VIZ00099687; (Exhibit A at VIZ00099687).

163. The Grant application includes a “Data and Materials Dissemination Plan” which includes sections on “Software, protocol, and data sharing” as well as “Commercialization”. D.I. 119-4 at VIZ00099686-VIZ00099687; (Exhibit A at VIZ00099686-VIZ00099687). The section states in relevant part: “Following principles also followed in the prior MGI CEGS, CTCHGV will openly share software, protocols and data.” D.I. 119-4 at VIZ00099686; (Exhibit A at VIZ00099686). The application further states that “In line with long-standing Church Lab commitments,” the program will champion practices that “encourage rapid data deposition and technology transfer, such as ‘Open Source Biology’ (OSB)”. D.I. 119-4 at VIZ00099686; (Exhibit A at VIZ00099686). As important to licensing, the application continues, “The related goal of OSB is to prevent exclusive licenses from potentiality interfering with technology transfer. In this regard, **we will try to move our technology either into the public domain or non-exclusive licensing mechanisms well before they would be normally publishable.**” D.I. 119-4 at VIZ00099686; (Exhibit A at VIZ00099686).

164. Further, the Grant promises that “To broaden the availability to the research community of innovations developed by CTCHGV, the Church Lab **will** work with the Harvard Medical School Office of Technology Licensing to **obtain open and non-exclusive licenses** that will encourage commercialization of these innovations.” D.I. 119-4 at VIZ00099689; (Exhibit A at VIZ00099689).

² Emphasis is added in bold throughout.

165. In awarding the Grant to the CTCHGV, NIH explicitly informed Harvard and Dr. Church that “Compliance with the data and materials sharing and release plans, described on pages 117-118 and 130-133 of the grant application **is a condition of this award**. Failure to comply with these plans may result in termination of the award.” D.I. 119-4 at VIZ00099748, and at VIZ00099754 (same); (Exhibit A at VIZ00099748, and at VIZ00099754 (same)). The referenced Grant pages correspond to VIZ00099673-VIZ00099674 and VIZ00099686-VIZ00099689 of D.I. 119-4/Exhibit A, respectively. Harvard and Dr. Church accepted the conditions set forth by NIH and subsequently received approximately \$20 million in research funding. In turn, Harvard and Dr. Church used said funding to develop the methods and system claimed in the Asserted Patents. In particular, each Asserted Patent explicitly states that the “invention was made with government support under HG005550 awarded by the National Institutes of Health.”

166. The conditions of the Grant were not public or made publicly available by Harvard, Dr. Church, or 10x.

167. The Asserted Patents continue to be subject to an obligation to be open and available to interested parties, including commercial entities, through “open and non-exclusive licensing agreements.”

168. This obligation to provide open and non-exclusive licensing agreements applies worldwide.

169. When 10x was assigned the rights to the Asserted Patents, it took on the obligation under the NIH Grant to make the patents open and available to interested parties, including commercial entities, through “open and non-exclusive licensing agreements.”

170. 10x and Harvard have received the benefit of the NIH Grant but failed to deliver on the express obligations tied to the Grant.

171. After receiving the NIH Grant funds and applying for the Asserted Patents, Dr. Church founded ReadCoor, which was an early stage genetics company. And despite promising to NIH that it would make the Asserted Patents available to all commercial entities via non-exclusive licensing agreements, Harvard and Dr. Church entered into a separate agreement that provided ReadCoor with an exclusive license to the Asserted Patents.

172. Then, on October 5, 2020, 10x acquired Dr. Church's company, ReadCoor, along with its patent portfolio and the ill-gotten exclusive license that ReadCoor had received from Harvard for the Asserted Patents, for over \$400 million.³ Despite promising to make the Asserted Patents available on a non-exclusive basis, Dr. Church and Harvard were handsomely compensated for transferring an exclusive license to the Asserted Patents from ReadCoor to 10x. Dr. Church received 10x stock valued at approximately \$13 million as a result of the acquisition of ReadCoor and its patent portfolio. Harvard likewise received 10x stock valued at approximately \$13 million as a result of the acquisition of ReadCoor and its patent portfolio.

173. Dr. Church continues to work as a consultant of 10x on products involving the Asserted Patents.

174. On information and belief, at least prior to filing this lawsuit, 10x knew of Harvard and Dr. Church's promise to license the Asserted Patents on a non-exclusive basis as a result of 10x's acquisition of ReadCoor and its continuing consulting relationship with Dr. Church.

175. On April 22, 2023, NanoString received for the first time a complete copy of the National Institutes of Health's Grant to Harvard that resulted in the Asserted Patents. NanoString

³ 10x Genomics, Inc., Annual Report (Form 10-K) (Feb. 26, 2021), https://www.annualreports.com/HostedData/AnnualReportArchive/1/NASDAQ_TXG_2020.pdf, at 79 (“[10x] purchased all of the outstanding shares of ReadCoor, a privately held company based in Cambridge, Massachusetts, for \$407.4 million.”).

was first made aware of the Grant by co-defendant Vizgen, who obtained the Grant by a FOIA request. Harvard and 10x continue to withhold discovery relating to the Grant. Indeed, despite multiple requests for production directly seeking this information operative since at least December 2022, Harvard withheld the complete Grant from NanoString. Nanostring reviewed the public version of the Grant application (which had the licensing commitment excised) for potential prior art and was deceived into believing the Grant was complete or anything else in the Grant would stop this action. Given that the Grant application was not prior art that NanoString planned to use, and the public version appeared complete substantively, NanoString did not prioritize it for discovery. The disclosure of the Grant also came a month after the close of proceedings in the co-pending German case, and less than two weeks before the German court is due to issue a determination on infringement, which would lead to an immediate injunction if found.

176. 10x and Harvard strategically hid crucial portions of the Grant from the public for years – particularly, disclosures relating to Church and Harvard’s commitments regarding the licensing of patents. This deception was intentional and fraudulently concealed the non-exclusive license commitment that was part and parcel of the Grant. For example, it appears Harvard submitted a truncated version of the grant application to the USPTO in the prosecution of one of the patents-in-suit, US Patent No. 11,021,737. In Application No. 16/941,585, Harvard submitted an Information Disclosure Form on February 5, 2021, identifying the grant application as item No. 26. However, the cited link suspiciously notes that the Grant, via the Wayback Machine, leads to a version of the grant application that stops one page shy of the critical disclosures at issue here, including the clear commitment to non-exclusively license the Asserted Patents. Thus, none of the public versions identified to date included the relevant licensing disclosures. A true and correct copy of the Information Disclosure Statement is attached as Exhibit B (D.I. 119-7).

177. On April 24, 2023, NanoString requested from 10x and Harvard an offer to non-exclusively license the Asserted Patents pursuant to the promise Harvard and Dr. Church made in exchange for grant funds from NIH. On April 26, 2023, Harvard and 10x refused to provide NanoString with a non-exclusive license offer.

Antitrust Violation

178. 10x and Harvard have not just failed to make the Asserted Patents open and available. Worse, they have brought injunctions in the U.S. and internationally to exclude threats to their market power and to monopolize the SST market. *Cf. Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 314 (3d Cir. 2007) (holding that intentional breach of a promise to license a patent on fair, reasonable, and non-discriminatory or “FRAND” terms gives to a monopolization claim).

179. Parallel to this case, on April 5, 2022, 10x filed an infringement suit against NanoString in a regional court in Germany based on the same Church subject matter. On November 23, 2022, Harvard joined 10x’s action in Germany. On March 23, 2023, the infringement hearing took place at the Munich regional court, where the court announced that the decision on action would be expected on May 4, 2023.

180. 10x and Harvard, as exclusive licensee and licensor, jointly coordinated and agreed to pursue a monopoly in the SST market. Dr. Church’s company ReadCoor obtained an *exclusive* license to the patents from Harvard, who under the Grant terms should have been providing “open and non-exclusive licenses.” D.I. 119-4 at VIZ00099689; (Exhibit A at VIZ00099689). Dr. Church then sold ReadCoor to 10x for more than \$400 million dollars while staying on as a consultant. As part of the deal, 10x got ReadCoor’s exclusive license to the Harvard patents. Certain of the asserted patents were still pending prosecution – including the 737 Patent with its truncated grant application submitted in 2021. Since 10x acquired ReadCoor, 10x and Harvard

have coordinated on patent prosecution to obtain several of the Asserted Patents to assert against NanoString. 10x and Harvard worked together to arrange a market-dominant position in SST whereby Harvard would continue to license the Asserted Patents to 10x exclusively, in violation of the NIH Grant terms.

Further, 10x and Harvard coordinated on an extensive litigation strategy to build a moat around their market dominant position. Most recently, 10x and Harvard together, pursuant to their anticompetitive agreement, instigated two separate patent infringement lawsuits in the District of Delaware, Civ. No. 22-595 and this matter, as well as a parallel proceeding in Germany. In the German proceeding, when litigation revealed a flaw in the Harvard—10x licensing agreement, Harvard and 10x promptly executed a new agreement to guard their exclusivity.

181. 10x and Harvard had the specific intent to monopolize the SST market.

182. NanoString offers the CosMx Spatial Molecular Imager (SMI), the first high-plex *in situ* analysis platform to provide spatial multiomics with formalin-fixed paraffin-embedded (FFPE) and fresh frozen (FF) tissue samples at cellular and subcellular resolution. The CosMx SMI can currently detect one thousand different RNA transcripts spatially at a resolution of <50 nm.

183. CosMx was made commercially available in December 2022 and was designed to combine the spatial profiling of a large number of biological targets with high-resolution imaging.

184. CosMx is a market alternative to 10x's SST product, Xenium In Situ ("Xenium"). Xenium was also launched in 2022.

185. The only additional participant in the SST Market is Vizgen who produces a SST product, MERSCOPE. Harvard and 10x are suing Vizgen and seeking an injunction to block from MERSCOPE from the market too.

186. If Harvard and 10x's conduct is permitted to continue, competition in the SST market will be destroyed. Their ill-gotten monopoly will seek monopoly profits, and customers of the SST market will be left paying higher prices for the only option left.

The Worldwide SST Market

187. A global relevant antitrust market exists for Single-Cell Spatial Transcriptomics (the "SST Market"). This is because the products offered within the SST Market, such as NanoString's CosMx SMI and 10x's Xenium, are sold to customers throughout the world and are not reasonably interchangeable with products outside the SST Market. Indeed, 10x has offices and distribution centers in North America, Europe, and Asia. For example, 10x is currently hiring in Japan for their SST product, Xenium, as well as other positions globally.⁴ 10x sells its instruments globally, with customers "including all of the top 100 global research institutions as ranked by *Nature* in 2021 based on publications and all of the top 20 global biopharmaceutical companies by 2021 research and development spend."⁵

188. When announcing its acquisition of ReadCoor, 10x Co-Founder and CEO, Serge Saxonov, stated that "[after] a comprehensive assessment of *In Situ* efforts **worldwide**, we are thrilled to welcome ReadCoor and CartaNA to the 10x team."⁶

189. On December 8, 2022, 10x announced that it "began global shipments of its Xenium Analyzer, the highest throughput instrument for subcellular *In Situ* profiling."⁷

⁴ Jobs at 10x Genomics, <https://careers.10xgenomics.com/careers> (last visited Apr. 27, 2023).

⁵ 10x Genomics, Inc., Annual Report (Form 10-K) (Feb. 15, 2023), https://s28.q4cdn.com/592666581/files/doc_financials/2022/q4/2ffc93da-baf2-4fb2-a9d4-9d210c5f1077.pdf, at 3.

⁶ 10x Genomics, Inc., *10x Genomics Advances into Emerging Field of In Situ Analysis with Two Acquisitions* (Oct. 5, 2020), https://s28.q4cdn.com/592666581/files/doc_news/2020/10/5/10x-genomics-advances-emerging-field-situ-analysis-two.pdf (last visited Apr. 27, 2023).

⁷ 10x Genomics, Inc., *10x Genomics Commercially Launches Xenium Platform for In Situ Analysis* (Dec. 08, 2022) <https://investors.10xgenomics.com/news/news-details/2022/10x->

190. Products within the SST Market analyze mRNA and Protein expression profiles with spatial context at the level of a single cell. The application of single-cell spatial transcriptomics is valuable for understanding more nuanced spatial variables of gene expression such as enrichment of ligand-receptor expression at the interface of interacting cells or cell lineage relationships in development.

191. Unlike single-cell spatial transcriptomic products, other spatial transcriptomic products offer a larger picture of gene expression in the form of mRNA transcripts. For example, technologies like NanoString's GeoMx Digital Spatial Profiler and 10x's Visium product, capture the whole transcriptome, displaying numerous genes localized spatially within a single experiment. These products do not offer the detailed information of a single-cell. For this reason, a scientist gathering data on the spatial context of a transcript *and* the unique transcripts in the cell would not find the GeoMx Digital Spatial Profiler or similar products to be a reasonable substitute for a SST product such as the CosMx SMI.

192. Additionally, several practical indicia demonstrate that the SST Market is distinct from other types of single cell analysis, including (1) industry or public recognition of the market as a separate economic entity; (2) the product's peculiar characteristics and uses; (3) unique production facilities; (4) distinct customers; (5) distinct prices; and (6) specialized vendors.

193. SST products provide unique characteristics which the industry recognizes as unique from other RNA analysis products. For example, when discussing the different spatial technologies involved in this case and another patent dispute with NanoString, 10x stated that "to say [the products] are the same technology is like saying that Wi-Fi and ethernet are the same

[Genomics-Commercially-Launches-Xenium-Platform-for-In-Situ-Analysis/default.aspx](#) (last visited Apr. 27, 2023).

technology because they both transfer data. The two technologies involve different developers over different time frames, different mechanisms, and, tellingly, **different commercial products.**”⁸

194. 10x CEO and Co-Founder, Serge Saxonov, highlighted the complimentary nature of their spatial products, stating that “Xenium is naturally complementary to both Chromium and Visium . . . [and] we don’t see any cannibalization [of Chromium sales with Xenium sales]. In fact, it’s just the opposite because the two platforms are incredibly complementary and the use cases tend to be very complementary what people use – kind of generate single cell data sets using Chromium and then follow-up, characterize their samples with in situ given in Xenium.”⁹

195. The SST Market also has high barriers of entry. SST products require dozens of foundational patents and technology to effectively compete. For example, 10x acquired over 110 patents and applications when it acquired Church’s ReadCoor and Carta NA. This was added to their 2020 patent portfolio that included over 825 patents and applications.¹⁰ Such acquisitions contribute to 10x’s “comprehensive and foundational intellectual property.”¹¹ In addition, new entrants commercializing single cell products, including SST products, are routinely subject to and threatened with patent infringement lawsuits. In recent years, 10x has brought similar lawsuits

⁸ 10x Genomics, Inc. et al. v. NanoString Technologies, Inc., No. 22-00261 (D. Del. Nov. 23, 2022), EFC No. 76) (emphasis added).

⁹ Comments by 10x CEO Serge Saxonov, 10x Genomics, Inc. (TXG) CEO Serge Saxonov on Q4 2021 Results –Earnings Call Transcript (Feb. 16, 2022), at 18, *available at* <https://seekingalpha.com/article/4487718-10x-genomics-inc-txg-ceo-serge-saxonov-on-q4-2021-results-earnings-call-transcript>.

¹⁰ 10x Genomics, Inc., *10x Genomics Advances into Emerging Field of In Situ Analysis with Two Acquisitions* (Oct. 5, 2020), https://s28.q4cdn.com/592666581/files/doc_news/2020/10/5/10x-genomics-advances-emerging-field-situ-analysis-two.pdf (last visited Apr. 27, 2023).

¹¹ *Id.*

against NanoString, Bio-Rad, Vizgen, and Parse Biosciences. These lawsuits have been brought in the United States and Germany.

196. A small but significant and non-transitory increase in price (“SSNIP”) of SST products would not lead to a customer using a product outside of the SST Market for all the reasons alleged above.

197. The geographic reach of the SST Market is worldwide. 10x operates internationally, and it markets Xenium to customers across North America, Asia, and Europe.

Dangerous Probability of Success

198. 10x and Harvard have a dangerous probability of success in monopolizing the SST market. 10x has paid almost \$500 million to acquire, and consolidate, the SST market. In addition to its over \$400 million acquisition of ReadCoor, in October of 2020, 10x acquired a similar SST company, Swedish company CartaNA, for \$41.2 million.¹² In addition to acquisitions, 10x is seeking to eliminate all viable rivals to its SST product, Xenium, through injunctions from patent infringement lawsuits in the United States and elsewhere against NanoString and Vizgen.

199. 10x touts that Xenium is “built to be the *in situ* spatial biology leader.”¹³ More generally, 10x admits that it is the “**established market leader** in single cell genomics.”¹⁴ In this matter, 10x described itself as a “**worldwide leader in genomics.**”¹⁵ The Xenium product webpage

¹² Malin Otmani, *10x Genomics Acquires Swedish Cartana*, Nordic Life Science News (Oct. 4, 2020), <https://nordiclifescience.org/10x-genomics-acquires-swedish-cartana/>.

¹³ 10x Genomics CEO Presentation, *Mastering Biology to Advance Human Health*, https://s28.q4cdn.com/592666581/files/doc_presentations/2023/TXG-JPM-Conference-2023-Final.pdf, at 20.

¹⁴ Am. Compl., 10x Genomics, Inc. v. Celsee, Inc., No. 19-00862 (D. Del. Nov. 14, 2019), ECF No. 31) (emphasis added).

¹⁵ 10x Genomics, Inc. et al. v. NanoString Technologies, Inc., No. 22-00261 (D. Del. Nov. 23, 2022), EFC No. 66) (emphasis added).

states that Xenium provides “High-performance in situ from the single cell leader.”¹⁶

200. News sources describe 10x as a “single cell leader” that “continues to redefine large scale and ease of use for researchers worldwide.”¹⁷

201. 10x and Harvard are using patent infringement cases to raise the already-high barriers to entry in the SST market even higher.

202. NanoString is an emerging market participant in SST, having entered the market in late 2022.

203. If 10x and Harvard are granted an injunction against NanoString in violation of a non-exclusive licensing promise, NanoString will no longer pose a threat to 10x and Harvard’s dominance in the SST market.

204. 10x and Harvard’s conduct has no legitimate business purpose or procompetitive effect. Their conduct is designed to exclude competitive threats and to monopolize the SST market.

205. 10x and Harvard’s conduct has had a substantial effect on interstate and international commerce.

206. NanoString has been or will be injured in its business or property as a result of the conduct, as there is an imminent threat to NanoString’s commercial product, CosMx SMI.

207. If Harvard and 10x succeed in enjoining NanoString’s CosMx product and Vizgen’s MERSCOPE product, then the Harvard-licensed and 10x-manufactured Xenium product will have a 100% share of the global SST market. Once that is achieved, 10x and Harvard can

¹⁶ *Xenium in Situ*, 10x Genomics, <https://www.10xgenomics.com/platforms/xenium#software> (last visited Apr. 27, 2023).

¹⁷ *10x Genomics Demonstrates Breadth, Scale and Leadership at 2023 AGBT General Meeting*, Cision PR Newswire (Feb. 6, 2023), <https://www.prnewswire.com/news-releases/10x-genomics-demonstrates-breadth-scale-and-leadership-at-2023-agbt-general-meeting-301739121.html>.

force customers in the SST market to pay artificially inflated prices to 10x and Harvard for use of their SST product.

FOURTEENTH COUNT

(Unfair Competition in Violation of California Cal. Bus. & Prof. Code § 17200 *et seq.*)

208. NanoString incorporates by reference and restates the preceding Paragraphs 1-207 of its Counterclaims as though fully set forth herein.

209. California Business and Professions Code § 17200, which is part of California's Unfair Competition Law, prohibits any person engaged in business in California from engaging in "any unlawful, unfair or fraudulent business act or practice."

210. 10x and Harvard engaged in Unfair Competition under § 17200 *et seq.* of the California Business and Professions Code (UCL) by engaging in unlawful conduct. 10x and Harvard's unlawful behavior based on the intentionally deceptive and anticompetitive conduct has harmed competition in California and elsewhere and threatens significant harm to competition in the future. 10x and Harvard's conduct is the direct and proximate cause of injury to California consumers and to NanoString.

211. 10x and Harvard engaged in unfair conduct in violation of the UCL, including based on the intentionally deceptive and anticompetitive conduct alleged above that also violates Section 2 of the Sherman Act. 10x and Harvard's unfair conduct threatens an incipient and continuing violation of the antitrust laws and significant harm to competition.

212. 10x and Harvard engaged in fraudulent and deceptive conduct, as alleged above in ¶ 208, in violation of the UCL, including based on the intentionally deceptive and anticompetitive conduct alleged above that also violates Section 2 of the Sherman Act. Harvard deceptively obtained the NIH Grant on a false promise to provide open and non-exclusive licenses to any patents derived therefrom, including the Asserted Patents. 10x and Harvard have refused to license

the Asserted Patents, all the while fraudulently concealing their contractual obligation to do so. 10x and Harvard's fraudulent and deceptive conduct threatens an incipient and continuing violation of the antitrust laws and significant harm to competition.

FIFTEENTH COUNT

(Violation of California's Cartwright Act, Cal. Bus. & Prof. Code §§ 16720, 16727)

213. NanoString incorporates by reference and restates the preceding Paragraphs 1-212 of its Counterclaims as though fully set forth herein.

214. California Business and Professions Code Section 16700 *et seq.*, which is part of California's Cartwright Act, prohibits any person engaged in business in California from "leas[ing] or mak[ing] a sale or contract for the sale of goods, merchandise, machinery, supplies, commodities for use within the State, or [] fix[ing] a price charged therefor, or discount from, or rebate upon, such price, on the condition, agreement or understanding that the lessee or purchaser thereof shall not use or deal in the goods, merchandise, machinery, supplies, commodities, or services of a competitor or competitors of the lessor or seller, where the effect of such lease, sale, or contract for sale or such condition, agreement or understanding may be to substantially lessen competition or tend to create a monopoly in any line of trade or commerce in any section of the State." Cal. Bus. & Prof. Code § 16727.

215. 10x and Harvard are engaged in business in California, and have carried out a contract, combination, trust, and/or conspiracy within the state of California for the purposes of injuring NanoString, destroying fair competition in the SST market, and maintaining monopoly power.

216. Beginning in at least October 2020 and continuing at least up to and including April 2023, 10x and Harvard have engaged in deceitful conduct.

217. NanoString's injuries are of the type that the U.S. antitrust laws are intended to prohibit, and flow directly from 10x and Harvard's anticompetitive conduct and is an illegal business practice in violation of California's Cartwright Act, Cal. Bus. & Prof. Code § 16700 *et seq.* Without NanoString as a viable competitor, the scientific community will be worse off with reduced choice in the SST Market and increased prices for SST products.

218. 10x and Harvard's conduct has directly and proximately caused injury to NanoString's business and property. As a result, NanoString has suffered and will continue to suffer injury to its business or property if 10x and Harvard are successfully able to exclude NanoString's offerings from customers. This exclusion will lead to less competition and higher prices for SST products.

219. 10x and Harvard's conduct is a substantial factor in causing harm to NanoString.

220. As a result of 10x and Harvard's continuing violation of California's Cartwright Act, NanoString has been and will continue to be damages through the date of trial, for which NanoString intends to seek damages, trebled, injunctive relief as permitted by applicable law, and any other relief this Court deems just and proper.

SIXTEENTH COUNT

(Violation of the Revised Code of Washington 19.86.020)

221. NanoString incorporates by references and restates the preceding Paragraphs 1-220 of its Counterclaims as though fully set forth herein.

222. RCW 19.86.020 prohibits "unfair methods of competition and unfair or deceptive acts or practices in the conduct of any trade or commerce."

223. At all times relevant to this action, 10x and Harvard have been engaged in trade or commerce within the state of Washington and within the meaning of RCW 19.86.010.

224. 10x and Harvard engaged in unfair competition under by RCW 19.86.020 engaging in unfair and deceptive conduct. 10x and Harvard's unfair and deceptive conduct has harmed competition in Washington and elsewhere and threatens significant harm to competition in the future.

225. 10x and Harvard's conduct is the direct and proximate cause of injury to Washington consumers and to NanoString. NanoString will continue to suffer injury to its business or property if 10x and Harvard are successfully able to exclude NanoString's offerings from customers. This exclusion will lead to less competition and higher prices for SST products.

226. 10x and Harvard engaged in unfair conduct in violation of the RCW 19.86.020, including based on the conduct alleged above that also violates Section 2 of the Sherman Act. 10x and Harvard's unfair conduct threatens an incipient and continuing violation of the antitrust laws and significant harm to competition.

227. 10x and Harvard engaged in fraudulent and deceptive conduct in violation of the RCW 19.86.020, including based on the conduct alleged above that also violates Section 2 of the Sherman Act. Harvard deceptively obtained the NIH Grant on a false promise to provide open licenses. 10x and Harvard have refused to license the Asserted Patents, all the while fraudulently concealing their contractual obligation to do so. 10x and Harvard's fraudulent and deceptive conduct threatens an incipient and continuing violation of the antitrust laws and significant harm to competition.

228. NanoString's injuries are of the type that competition laws are intended to prohibit, and flow directly from 10x and Harvard's anticompetitive conduct and is an illegal method of competition in violation of RCW 19.86.020. Without NanoString as a viable competitor, the

scientific community and end-customers will be worse off with reduced choice in the SST Market and increased prices for SST products.

229. 10x and Harvard's conduct is a substantial factor in causing harm to NanoString.

230. As a result of 10x and Harvard's continuing violation of RCW 19.86.020, NanoString has been and will continue to be damages through the date of trial, for which NanoString intends to seek damages, trebled, injunctive relief as permitted by applicable law, and any other relief this Court deems just and proper. RCW 19.86.090.

REQUEST FOR RELIEF

WHEREFORE, having fully answered 10x and Harvard's SAC and having asserted Affirmative Defenses, and Counterclaims, NanoString respectfully requests the following relief:

A. That this Court enter judgment on 10x and Harvard's SAC and NanoString's Counterclaims in favor of NanoString, against 10x and Harvard, with 10x and Harvard being awarded no relief of any kind in this action;

B. That this Court enter judgment and/or declarations that NanoString does not infringe the Asserted Patents and that the Asserted Patents are invalid and unenforceable;

C. A declaration that any and all exclusive licenses to the Asserted Patents entered into by Harvard in furtherance of the unlawful conduct herein are void;

D. That 10x and Harvard be required to pay NanoString:

(i) three times the actual damages sustained by NanoString as a result of 10x and Harvard's Sherman Act and certain state law violations complained of herein, including NanoString's legal fees and costs associated with this action;

(ii) additional forms of monetary relief, including punitive damages, sustained by NanoString as a result of 10x and Harvard's state law violations complained of herein;

E. That this Court enter a judgment declaring this case exceptional under 35 U.S.C. § 285 and awarding NanoString its attorneys' fees and prejudgment and post-judgment interest;

F. That this Court award NanoString all of its costs of this action;

G. That 10x and Harvard be enjoined and prevented from seeking to exclude competition in the worldwide SST Market;

H. That 10x and Harvard must specifically perform under the Grant by which NanoString is offered a *bona fide* non-exclusive license to the rights referenced in the Grant licensing commitments at a reasonable rate to be negotiated in good faith by the parties, or, alternatively, a compulsory license to the rights referenced in the Grant licensing commitments at a reasonable rate to be determined by a fact-finder; and

I. That this Court grant such other and further relief as the Court shall deem just and proper.

Dated: July 18, 2023

Respectfully submitted,
FARNAN LLP

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